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EDITED BY
HENRY WARD BEECHER, Indianapolis,
EDWARD J. HOOPER, Cincinnati, Ohio.

S. V. B. NOEL, *Publisher and Printer.*

WESTERN FARMER AND GARDENER.

INDIANAPOLIS, TUESDAY, DECEMBER 1, 1846.

WESTERN FARMER AND GARDENER, VOL. III.

A Plain Talk from the Editor to his Readers.

The continued ill health of Mr. E. J. Hooper has prevented him from rendering, during the issue of the volume, now closing, such assistance as was intended; and, at length, to withdraw from its connection. We deeply regret the cause of his relinquishment and hope that the time is not distant when his pen will be again found exercised in his favorite vocation.

Hereafter, the Western Farmer and Gardener will be published and issued at Indianapolis, Ia., and edited by H. W. Beecher. A few words as to its future course.

Hereafter we shall have but one price, and that FIFTY CENTS, *in advance*, whether there be one or one hundred names. Whoever, moved by a desire of diffusing information, will procure subscribers, in his neighborhood, may deduct *twenty per cent.* of all moneys received, for his trouble. *We shall strictly adhere to the rule of requiring payment in advance*, except when some one man will assume the responsibility of paying for the list in his neighborhood. Whenever, under such conditions, payments are deferred, it is to be understood, that the favor is not toward us, but toward the subscribers; and we cannot, therefore, in such cases, allow any discount for the trouble of collecting, &c.

By reducing the price from a dollar for single subscribers to a uniform price of *fifty cents*, we have been obliged to reduce the expenses of publication. This we do by publishing monthly and in a form which will reduce the cost of *press-work one half;* also, by putting the matter, first, in the INDIANA STATE JOURNAL, charging *it* with the cost of composition, and not the Farmer and Gardener. Our pages will be found to be nearly a third larger than hitherto, but not so many in number—the whole annual number, hereafter, being 200.

The matter will be decreased thus, one-third. We are ready to double the number of pages whenever our friends shall express a wish to that effect, in the right way. A publisher is one of the most reasonable of all beings when properly dealt with; and our publisher is not an exception.

After due allowance is made for the routine applause of kind-hearted journals, and for the partiality of personal friends, there yet has been such approbation expressed of the two volumes, issued from this place, as lead the editor to hope that its discontinuance would, by not a few, capable of judging, be regarded with regret. The situation

of the editor is such that he is not able to do more than to superintend the contents of the volume; he has not a particle of time or strength to secure or extend its circulation. That must be the work of those whose public spirit, or sense of personal interest, leads them to desire the extensive diffusion of information. The first volume closed with, if we remember aright, about 700 paying subscribers: this, the second volume, will close with not over 1200. The increase is healthy, although somewhat slow. It is not so important that the editor has rendered his services gratuitously; but this ought not to be required of the publisher, with whom the issuing of the Farmer and Gardener is a part of an honorable business by which alone he has his livelihood.

Our taste will not allow us to put on the appearance of immense prosperity as a means of obtaining it; we cannot, on the receipt of ten subscribers, sit down to announce to an astonished public that immense numbers are rolling in upon us; nor have we any relish for the language of self-laudation, innocently called puffing. If the Farmer and Gardener succeeds, it must be in a plain, honest, strait-forward way; or, otherwise, its success must take place under some other hands. Every year we shall make an honest exhibit of our exact condition. If we prosper, our friends shall rejoice in knowing it; if we fall behind, we know of no reason why we should be ashamed to let it be known. We have not, even in dreams, thought ourselves the rival of that excellent western paper, the Prairie Farmer; nor of that almost perfect eastern paper, the Cultivator. And we have not therefore, any vanity to be wounded in being obliged to record our solitary hundreds by the side of the increasing thousands which they so richly deserve. Indeed, although we are not aware that humility is our *forte*, we have a sense of misgiving when those who are taking these and other sterling papers, exchange them for ours, through a desire to support home-papers, as if we were the innocent cause of giving them the worst end of a bargain. But if *they* think that they have their *quid pro quo*, we confess to vanity enough to be glad of it.

HENRY WARD BEECHER.

A PROPER MODE OF GIVING ADVICE.—As we were passing the store of Messrs. Horns, we were called in and presented with a hat of beautiful finish, and in the height of fashion. Although we were aware that our old hat was on the wane we had not suspected how badly it looked; and we could not but admire the good sense of our friends in conveying us an intimation thereof in so edifying a manner.

REVIEWS.

REPORT OF THE AUTUMNAL EXHIBITION OF THE CINCINNATI HORTICULTURAL SOCIETY FOR 1846.—The number of practical cultivators in Cincinnati, the wealth which has been so liberally applied to the elegant art of Horticulture, the public spirit which has been shown, and the evident progressive utility of the Cincinnati Horticultural Society, give the community a right to expect from them the best model of procedure. A Horticultural Society, primarily, is designed for local benefit; such societies, by comparison of products, by a generous emulation, by embodying the scattered experience and knowledge of many, and making the wisdom of one the common property of all, will always advance the gardening art in the places where they are formed. But when by any reason a society has a right to a larger sphere of influence, it must aim to perform for regions what town societies affect for localities. This is the position of the Cincinnati Horticultural Society. It is impossible to imagine a field more ample; indeed, a feeling of wonder, and almost of admiring envy is excited at the sight of a city surrounded by such fertile States, under such congenial skies, and fired with such enthusiasm for improvement. To be the acknowledged head of the West, in horticulture, is no mean elevation or honor.

It becomes the Society to discharge the duties which it owes to Science and to the community, with scrupulous care. Above all things *accuracy* is to be studied, and attained at any price. Carelessness, looseness and inaccuracies are so infectious that if they have precedent in such a society there will be no end to them. It is impossible for individual cultivators to reduce the nomenclature of fruits or flowers to order; only such associations as the London, the Massachusetts, and the Cincinnati Horticultural Societies, have authority enough to procure acquiescence on all hands. It is a duty of the Society of the "Queen City" to follow the example of her two elder sisters, in the right naming, correct authography of fruits and flowers and in the due classification of synonims. It is quite ridiculous to observe the spelling of names in our catalogues and nursery labels, and in articles in agricultural journals. We cannot at first and among merely practical men expect anything else. A sagacious Hoosier by twenty years intimacy with the nursery, may become eminently skillful in rearing trees, without having learned from such company a word of French, or one rule of systematic Botany. We are not surprised, therefore, when, as happened within our knowledge, a shrewd fellow (an unbeliever in all religion by the way) wrote Bon cheatem for Bon chré-

tien;—nor, that foreign names are often shorn of their glory. But we are, and of right, much surprised at mistakes of this kind in eminent societies. We are constrained to say that our friends ought not to have issued a report, or they should have made it worthy of their Society. The names of fruits and flowers seem to have been hastily copied from the lists furnished from exhibitors and to have been made out by *them* still more hastily, in the hurry of sending their plants to the show. Even the ordinary typographical errors abound; we have Hoya carnota, for H. carnosa; Polypodeum; for poly podium; Achemenes for Achimenes, Manetta for Manettia; Polyanthos is half roman and half italic thus, *Polyan*thos, &c. &c. Such errors in familiar words would mar our pleasure; but in names not familiar they would mislead those not accurately informed.

The almost universal practice of the best writers is, to give the generic and specific names alike in roman, or italic, letters; capitalizing the genus and not the species;—thus; Azalea obtusa, Anemone japonica, Daphne fortuni; or if in italic, all italic; as *Azalea obtusa*, &c.

In vocabularies, where the eye requires a variety of type to aid in discriminating terms, this practice is varied—but not elsewhere.

We have no objection to variation from established custom when any reasonable benefit accrues; but we cannot see that italicising the genus and romanizing the species, (as, *Ficus* Religiosa, *Passiflora* Alata, &c.) has any advantages which should induce the Society to depart from well established usage.

We are surprised at the multitude of mis-spelled names of flowers and fruit, which a moment's diligence should have prevented. Paulownia imperialis is thrice written Polowna; and but once, in Mr. Hoffner's list, correctly. Roses suffer sadly. Why are French names sometimes retained and sometimes translated, without any apparent rule for uniformity? If Eliza Savage is written *Elize Sauvage* why is not Princess Maria, *Princesse Marie?* If we write Triomphe de Luxemborg, (it is not borg, nor berg, nor burg, nor burgh, but bourg,) why not Reine de Lombardie, Reine des Bourbons, instead of Queen of Lombardy &c.?

We have La Pimiloe, which one will search for in vain in catalogues and be glad to take instead, La Similor;—even this on another page is spelled, Similior, as if it were from the comparative degree of the latin adjective, Similis. What has the beautiful oriental Zobeide done that it is "written down an ass"? At any rate, it is written Tobide; a rose by the bye, which our friend S. S. Jackson says is pure white, and Prince, *cherry* color. Greville is humbled to Staville.

We find popular and systematic names strangely jumbled togather, Magnolia pumela, *European Laurel*, Bigonia discolor, *White Oleander*, &c (which is meant, bignonia or begonia?) The genus is often given as if it were the specific name; thus on page 5, we find that Mr. Longworth sends "Yucca aloefolia; *Aloe.*"—which of the many aloes—A. vulgaris, or A. barbadensis, or A. soccatrina, &c.? The family, *Tabermaemontana*, would seem to be the name of a single tree—a species. *Melaleuca*, is the mother of many children, and not a single, solitary maiden.

Even more noticeable, because more familiar, are the mistakes in the names of fruit. Russet is spelled sometimes with one and as often with two t's. We have Newtown and Newton pippins. The French have a famous apple which from the beauty of its blossoms is named Belle Fleur: it is so spelled by the London Horticultural Society; and Downing, with his usual judgment, so spells it in his vocabulary. We find it in this report, Bell Flower, Bellflower, Brabant Bellefleur and Brabant Bellflower. The French orthography is certainly the classical one. But if it is to be anglicised it is ridiculous to translate *fleur* and stick on the untranslated Bell, docked of its final *e* at that. We have Seckel, which is right; and Seckle, which is wrong. We have two-thirds French to one-third English in the Plum, Reine claude *Violet*, instead of *Violette*. Talepouchan for Talpehacken, Rock Raymon, for Rockrimmon, which *should* give place to Rawle's Janet.

Pray, gentlemen, do not be angry with us and say that we are hypercritical. The public certainly have a right to expect accuracy in familiar things in a report "published by the Society." How will these things appear, Mr. Longworth, to our Boston Critics? What, Mr. Ernst, would Dr. Lindley think of horticulture and systematic botany in Ohio? What would be thought by us, to see such errors in the reports of the Massachusetts or London Horticultural Societies? These things ought not so to be.

Almanacs.—We have received a score, more or less, of Almanacs for 1847, and for the most part, issued in connection with Agricultural Papers, and highly worthy of circulation. The Prairie Farmer Almanac is exceedingly neat, and stuffed with a spiced variety which would put to shame the most bountifully gorged thanksgiving goose or turkey. Mr. Affleck, of the N. O. Com. Times, stands god-father to an almanac, one half of which is very useful to readers and the other half to advertisers. We suppose the latter portion of the work the more profitable to the publishers. The Genesee Farmer has given a worthy annual to its subscrib-

ers The *name*, however, seems inappropriate—"*The* AMERICAN *Cultivators' Almanac*"—inasmuch as most persons would suppose it to be the bantling of the (Albany) Cultivator.

Then we have a *very* neat "*Young Vermont Mathematician's Almanac*," published by J. A. James, of Cincinnati, for which our thanks are due to N. Longworth, Esq. This prodigy, Truman H. Safford, is by far the most wonderful that ever we read of. Precocity in some one faculty is not infrequent. In this case the whole intellect seems to exist in a degree that would be extraordinary in an adult, and is especially so in a child. We understand that his parents have been induced to remove from Vermont to Cambridge, Mass., and that the child is to be under the care of the professors of Harvard University. We cannot deny our readers the pleasure of one extract respecting this child, and have, in the proper department, given a detailed account. This almanac is entirely the result of the calculations of a boy ten years old—and is regarded rather as a play and amusement than as a labor.

CHEMICAL PRINCIPLES OF THE ROTATION OF CROPS. Our thanks are due to Dr. D. P. Gardner, of N. Y., for this beautiful portion of the transactions of the American Agricultural Association. We shall give, soon, copious extracts.

IMPROVED CATTLE.—With the exception of here and there a neighborhood, Indiana may be regarded as altogether destitute of improved stock; and, seemingly, without much ambition to procure any. For instance, suppose a person living at Indianapolis or vicinity, had a fine cow, and desired the services of a thoroughbred bull, we do not know, within twenty-five miles, of a single animal that could be found. There are a few farms where cattle have a dash of good blood; there are a few so called half and three quarter Durhams, bought of drovers from Kentucky, of which it may be said, "If these are Durham, the fewer we have the better."

This district of country must be, very largely, a cattle-raising country. The demand for beef hereafter will be from foreign countries, and nothing but the choicest article will bear shipment. It seems to be a strange want of wise foresight to neglect our herds, and to be content with scrawny, bony, flabby cattle.

SOWING CEDAR SEED—In addition to the remarks of Dr. Plummer and of Mr. Affleck on the subject of our title, we will give some particulars of the mode of preparing and sowing cedar seed practiced by Aaron Aldridge, of this place. The seeds when ripe are gathered, and, at a convenient time, put into a strong coarse linen bag, in such quantities, successively, as will enable the operator to perform with ease. Good soapsuds are then taken, the refuse of the housewife's washing-day will do, and the bag is used upon a washing-board just as if it were a very dirty vestment, and until the gummy matter upon the seed is entirely removed. The seed may then be put into boxes of sand and exposed to the winter wet and frost, or planted in nursery-rows. The largest portion of the seeds will germinate the first year.

The apple known as *Minister Apple*, is said to be a great grower and a great bearer. The fruit is large and handsome, is one of the best dessert winter apples, and is destined eventually to supercede the Baldwin. This is a new fruit, and as yet, in the East, cultivated to a small extent.

COMMUNICATIONS.

PROLIFIC CORN.

RICHMOND, Nov. 27th 1846.

Mr. Beecher:—I send you by the bearer, three ears of Indian corn, raised by Daniel P. Wiggins on his farm, two miles South East of this place. As the corn is of an excellent quality, and as the quantity which a small piece of ground produced, is very unusual in any country, I thought it deemed an agricultural notice. Sometime during last fall, Mr. Wiggins procured from a friend of his in the neighborhood of the North Bend, a small quantity of the seed, which he planted on the 25th day of April in a field with other corn—such as he had been raising for several years. Both pieces of ground were planted on the same day, and both received the same tillage. I examined the ground on which both kinds of the corn were planted; but I could discover no difference in the quality of the soil; and I am very confident there was none.—From the piece of ground on which he had planted the corn of which I send the specimen, 140 feet long and 95 feet wide, he gathered thirty six bushels of good sound corn, being at the rate of one hundred and fifteen bushels at least to the acre.—The part of the field planted with Mr. Wiggins' own corn produced about 65 bushels to the acre. I may remark, that the seed was grown on upland. This corn deserves a trial by the farmers of this country: and I hope it may receive a fair one.

Mr. Wiggins is one of the best farmers in the county of Wayne;—he is earnestly devoted to the agricultural interest of the country, and anxious to see that interest sustained by every laudable man.

I am, Sir, respectfully yours, &c.,
JAMES PERRY.

The corn mentioned, we have received; it is very large, but it seems to us somewhat more *cole* than should be—but its prolific notice makes it worth while to give it a full trial. We will distribute what we have, with pleasure, to such as wish it and will call for it at the Farmer and Gardener office.—[ED.

LETTER FROM MR. LONGWORTH.

CINCINNATI, Oct. 27, 1846.

Dear Sir:—I returned from the east a week since, and it is this moment only that I have read your just rebuke of Mr. Hovey. * * * He raises a point that a child who ever heard of botany would not raise, to-wit: "Are there male and female strawberry plants?" I presume he wishes it to be understood that I had started so rediculous a proposition. Yet it is true for all practical purposes, in raising from seed. For a large portion of the plant will be so defective in stamens or pistils as never to produce even an imperfect berry. Again, he speaks of my conflicting views about male and female Keens. I have a staminate seedling raised by Keen, and is the same so much lauded in England, but will not average one third of a crop. I have also a pistillate Keen, raised by him, a better bearer and a better fruit than the Hovey, and the whole crop will surpass the Hovey in size, though a few of the Hovey berries are larger than any other. The necked Pine also surpasses the Hovey in productiveness, and its average size equals, if it does not surpass it. With us there appears a disposition in the Hovey, when a year old, to die out. I have both staminate and pistillate Hudsons. The original plant is pistillate flower seed. I have raised both staminate and pistillate Hudson Plants. Mottier's seedling is a seedling from the original Hudson, and resembles it in all particulars.

How dull must Hovey's comprehension be by his own showing, when he admits it took him twelve years before he "was fully assured the Boston Pine had no superior in all its qualities combined" and a like period to ascertain his old seedling was defective in male organs. The children who work in our market gardens would have told him their true character in seeing their blossoms at the distance of 20 feet. A. H. Ernst, last season, had two dozen of the Boston Pine sent him by Hovey, and they did not produce a single perfect fruit. Like all other large fruited staminates that I have seen for the last twenty-five years, it will not average one fourth of a crop of perfect fruit. I have offered and am ready to give $500 for a variety perfect in both organs, and producing a full crop of large perfect fruit. I do not say that a perfect plant may not be raised bearing a full crop of large perfect fruit. But I have tried all the famous varieties that are said to possess this character, and never found one that did, and would cheerfully give $500 for one, for it would enable all to raise this delicious fruit in abundance, and reduce the price so low as to bring it within the reach of the poorest laborer. I have been thus explicit that you may fully understand my views.

N. LONGWORTH.

POTATO ROT.

WESTLAND, NEW READING, Ohio,
Oct. 17, 1844.

Mr. Beecher:—Permit me to make a few remarks upon that disease which is prevalent among the potatoes, called the *rot*—a disease which is exterminating this esculent in Europe, and to some extent on this side of the Atlantic, and which has hitherto baffled, as far as I am informed, all efforts to stop it. I have cultivated several akers of potatoes this year; some early and others late—all of the Neshanoc kind. My early potatoes I dug in the fore part of July, a great many of which I found rotting in the ground. They were affected when first taken from the earth, and looked like a potato which had been frozen and then thawed; (that is, the part of the potato which was affected) was covered in many places with black spots and, upon pressing, water would ooze out, and after being exposed to the sun, the whole potato would rot in a short time. My potatoes were grown upon hilly ground, particularly the early ones, and I found the rot to be worst in that part of the ground which was the best, whilst in the poorer part of the ground the potatoes were free *entirely* from the disease. The disease would appear to be contagious, as I found those potatoes which came in contact with others affected, would soon show signs of the rot.

My late potatoes, which I am now *plowing* out of the ground, have more or less of the rot, and are affected with it in nearly the same way as the early ones, with this difference. On cutting one which is diseased, I find black lines or streaks near the internal surface of the skin of the potato, and extending all around that part of the potato which is affected; for part of the potato may have the rot and the remaining part not. I find, also, the affected potatoes do not rot so soon on being exposed to the sun and air, as was the case with the early crop. They have the same dark spots on the outside as the others, but do not seem as if they had been frozen; and I find on cutting one diseased, that the inside has a very bad smell. My late, as the early, have the rot in the richest part of the ground; those in the poorer not being affected. I have said my potatoes were the Neshanoc, but there is a few of other sorts, and I have not found one of these kinds, such as the round white or blue potatoes, in the least tainted with disease.

Such, sir, is what I have observed with regard to the rot in my potatoes. I would like to know if others have had their potatoes affected in a similar way; and if so, that they would make it known through the medium of your valuable periodical. However their potatoes may be diseased I hope it will be made known to the public, as it is a matter which I consider of some importance. The idea prevails with many, that the potato has run out. I pretend not to say such is a fact or that it is not; and I should rather think from reading an editorial of yours in the 17th number of the Farmer and Gardener, that you would not become a disciple to the run-out theory with regard to potatoes any sooner than you would with regard to apples. I hope you will give some account of the rot in and about your vicinity.

The cause of this disease in potatoes—but no, I must stop, for I might be entering within the bounds of metaphysicians.

I remain yours &c.,

J. W. GILBERT.

P. S. I had like to have forgotten to ask one very important question, which is, what time in the year is the best for cutting briars?

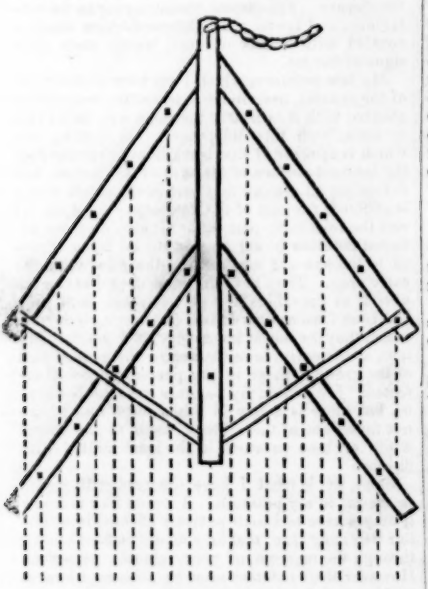
I must ask another: Has the moon anything to do in the business.

Some of my neighbors say the dark of the moon in August. Well I have cut them at that time; but it would not do, for up they came as thick as volunteers on the Rio Grande, but in better health.

J. W. G.

THE HARROW.

Some time in the spring, we believe, Dr. Plummer sent us an account of his improved harrow; and later in the season a detailed description and drawing. After long delay in obtaining a wood cut we present them to our readers, in time — for another season! The description was written, at first, without a drawing; which was afterwards made at our request. This is the reason why the description does not refer more particularly to the wood cut.—*Ed.*



THE HARROW.—By turning to page 104 of the present volume of the Farmer and Gardener, the reader will discover why J. F. K. says he has been "patiently waiting for J. T. P's plan of a harrow" &c. I have delayed reporting until now, that I might have a full opportunity of testing the implement in its various applications to all kinds of soils, sods and littered fields that my own farm would furnish; and before I say anything of the merits of the harrow and of its construction, I wish it to be remembered that I do not claim it as an invention of my own. My language on page 104 is: "I am about to have my harrow constructed nearly like that of Gedde's, but without the joint" (incorrectly printed *point.*)

The harrow I had made consists of five pieces of oak timber, three by two and a half inches, so fitted together as to resemble two V's of the same size, one behind the other; or rather, one partially inserted into the angle of the other; with the fifth piece running from the point of the foremost V backward through the point of the other V to a line even with the ends of this V. Or, supposing one piece of timber five feet long laid down, and two other pieces each four feet long tenoned into it on each side at an angle of 35°, and about fourteen inches apart, measuring across the side pieces at right angles, we shall have a similar figure. But it is evident that the ends of these side pieces need bracing: for this purpose I had a lighter piece of oak let into the loose ends, (or rather two or three inches from the ends,) and into the end of the middle piece. There are nineteen teeth so inserted into this frame as to run two and a half inches apart when the harrow is in use. Curious to know what such an implement when completed, would weigh, I had it placed on our hay-scales and found it to equal 142 pounds.

As to its value in the field, I can say this much: it runs as steadily as the best implement of the kind I have seen in operation, both as regards lateral and forward motion; it is easily freed from rubbish; by removing the middle tooth (the only one in the middle timber) it is well adapted to the cultivation of corn; it is apparently of easy draught; and I think, not so liable as many harrows are, to be damaged by obstructions. Mine cost me $8.25

POTATO CROP IN WAYNE COUNTY.

I have taken some pains to ascertain the character of our present potato crop; and have now the following information respecting it.

The potatos generally have yielded well, and some fields appear to have suffered but little; other crops had turned out variously.

1. "Out of two hundred bushels," is the language of one, "I shall lose but five." Soil dry —a very old sod used as cattle ground.

2. "I have lost at least half my crop; the lower part of the patch, which is wet, is nearly a total loss; the dry part of the slope turns out better, but even there, there is much rot." Slope, part of a long tilled corn-field, inclined to the west—woods on the south and east sides.

3. "My crop is about 120 bushels, and I shall lose about one tenth." Ground, dry; on the sloping sides of a little valley running north and south. Two rows encroached on a corn-field; the residue of the patch was an immemorially old sod.

4. "Both my potato patches are on the sides of water courses but in a dry soil; the crops are comparatively small, but I have not found a rotted potato. The Shaker blues yielded more largely than the Mercers.

5. "All my potatos rotted, except perhaps a bushel." Level, damp soil.

6. "I raised a few potatos in my garden [at Dublin] but there was scarcely one fit to eat, on account of the rot." Dry ground.

7. "We raised about 200 bushels on a lot that had been in potatos five years; the ground was dry and inclined to clay. I discovered no rot."

8. "I dug my potatos early in the season, and buried them; in a week or two they were nearly all rotten."

9. "My potatos were sound so far as I discovered but they were small." Dry soil.

10. "In my garden I raised fifty bushels of potatos, and observed no rot." Dry soil.

The foregoing is a pretty fair specimen of more numerous answers. Some of the solid potatos I examined, had a peculiar offensive odor when broken in two; the fine blue stains of the Neshan-

ocs was converted into a dirty brown; and all over the surface of the tuber were patches of dry gangrene; sometimes all within the colored circle of the Neshanocs resembled a water-cored apple. Other potatos were perfectly decayed into a slushy mass of a putrid smell; many were affected with dry gangrenous spots* throughout the interior; and in a few cases I met with the fungus† in the boiled potato, from which it easily separated on breaking open the tuber to eat.

Our potato lots are generally small, rarely exceeding an aker.

As many of the affected potatos were dug *before frost*, cold could not have produced the disease in these instances. If the reader is disposed to ascribe the malady to atmospheric temperament or vicissitudes, he may feel some interest in examining the weather tables reported to the Farmer and Gardner.

The Gardner's Chronicle (of London) in reference to the potato rot says: "It *invariably* begins as a brown decay of the bark of the potato stem, under ground and an inch or two above its origin from the old set. To this we have never yet found an exception; [wouldn't some of our young critics say this is tautologous with "it invariably begins," &c.?] all the blotching and scaring of leaves is long posterior to this." This, as far as it goes, exactly accords with the description of the incipient stages of the decay given on page 232, of Vol. I, of the Farmer and Gardener, by the present writer.

Perhaps I shall not soon have a better occasion than the present for relating the following facts, of which I have a distinct recollection: Eight or ten years ago I put my domestic store of potatos into the cellar with ordinary care; in a short time the family reported that many of them were rotted and were very offensive. I assorted them so as to leave none but sound ones, some of which were wet with the juices of those I threw away. In a week or two afterwards a similar complaint was made of the potatos. I now brought up the remainder of the sound ones; wiped them and dried them for several days near a stove kept hot through the day and replaced them in the cellar. In ten or fourteen days I was again informed that the potatos were as bad as ever. And thus they continued to fail—the rot consuming one portion and we the other. The rot was altogether slushy.

J. T. P.

CINCINNATI HORTICULTURAL SOCIETY.

October 24th, 1846.

On motion of Mr. Ernst, it was

Resolved, That the Secretary be requested to furnish weekly a copy of the proceedings of this Society to the "Western Farmer and Gardener," for publication.

Oct. 31st

No meeting.

Nov. 7, 1846.

The monthly meeting of the Society was held at its rooms, on Third street, the President in the Chair.

Minutes of the last meeting read, and approved.

A report by Gen. M. S. Wade, from the committee appointed to attend the exhibition of the Pennsylvania Horticultural Society as Delegate from this Society was read, and, on motion, accepted and ordered to be placed on file.

Mr. Anthony made a report, giving an account of his visit to several of the eastern horticultural societies, with remarks on subjects connected therewith; which was accepted and ordered to be placed on file.

The resolution, laid on the table at the last monthly meeting, was taken up, and after considerable discussion was adopted, after having been amended so as to read as follows, viz:

"*Resolved*, That the sum of one hundred and fifty dollars be appropriated to the purpose of procuring an elegant engraving for a diploma, to be used as a certificate of membership, and for other purposes." It was then

Resolved, That each person receiving a diploma of membership, be requested to pay fifty cents to the Secretary, for the benefit of the Society.

Resolved, That a committee of three, consisting of Messrs. Foote, Anthony and Flagg, be appointed on the subject of an engraving for the diploma.

Resolved, That the several committees on fruits, flowers, and vegetables, be requested to prepare a schedule of premiums for the next annual exhibition, and report to the next monthly meeting.

EXHIBITED.

By Dow Smith, Raritan Sweeting and Surprise *Apples*.

By Wm. Resor, Texas Mustang *Grapes*, very inferior.

By J. T. Warder, of Springfield, fourteen varieties of choice *Apples*.

By G. Brain, of Springfield, and Doct. Warden, three varieties of very fine *Apples*.

By R. Buchanan, Michael Henry Pippin, Spitzenburg, and a new sweet seedling *Apple*.

From Judge Wright, Vandervere, Gloria Mundi, and Belmont *Apples*.

By C. W. Elliott, Lansingburgh *Apple* and Portugal *Quince*.

By J. Hoffner, a *Pomgranite*, very large and fine.

Adjourned. J. P. Foote, *Rec. Sec.*

November 14, 1846.

The Society met as usual, the President in the Chair.

Mr. Ernst laid before the Society a letter from Job Haines, Esq., of Dayton, with a box containing forty kinds of apples, which had been exhibited at the fair of the Montgomery County Agricultural Society, requesting the Society's opinion respecting their names, qualities, &c.

Mr. Ernst moved that the thanks of the Society be given to Mr. Haines, and that the specimens be referred to the fruit committee for examination, with a request that a report thereon be made as soon as practicable; which motion was carried.

Mr. Cady presented specimens of four kinds of apples from Doct. Whipple, of Greene township; which were, on his motion, referred to the fruit committee.

Doct. Smith exhibited specimens of the germination of Rose and Geranium leaves planted singly in pots, showing a very rapid formation of roots and the commencement of vigorous, healthy shoots therefrom.

Mr. Hoffner exhibited a variety of fine Chrysantheums, and then the Society adjourned.

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* *Fusisporine of Martius and Muhlenbeck?*

† *Prichardine of Dr. Muhlenbeck?*

SELECTIONS.

THE QUINCE.

A friend enquires as follows:

Will quinces do well on a piece of level rich land? If so, how are they to be brought to bear the earliest? And can the *very best* be obtained at Mr. Aldredge's, of your place? or is there much difference in varieties?

The largest and tenderest radishes I have ever seen, either for spring or fall use, are raised by an old farmer near this place, as follows: When they are the size of a goose-quill, dig around and rub or cut off all the lateral roots and cover again within one inch of the top, and repeat every eight or ten days, leaving nothing but the tap, until it arrives at the size required. H.

We have nothing to say that has not been well said by Downing, whose whole chapter, on this subject, we extract. By the way, why are a half dozen copies of the *Fruit and Fruit Trees of America*, beyond all question the best pomological manual, all things considered, which has appeared, at home or abroad, suffered to lie at our bookstores, for a year, unsold? It is not to the credit either of our private cultivators or nurserymen.

To return to the quince; we marvel that so few trees have found a place in our collections of fruit. Quinces bear transportation and will, upon an average, bring two dollars a bushel. They sell extravagantly high every year in this place, and yet no one seems to take the hint.

Our favorite mode of increasing the quince, is by layers. The tree being low and inclined to be bushy, there is always an abundance of suitable wood to lay down. Twenty or thirty or even more rooted plants may be obtained in a single season; and the layers throw out such a profusion of roots that the only difficulty will be to separate each plant with its roots from the tough and matted abundance which will be found to have filled the soil. If laid down in the spring, they may be removed by midsummer, a cool and moist day being chosen, and the plants shaded until they start again to growing. If this is done, a second set of layers may be put down to remain over fall and winter and be removed the next spring.

Trees intended for the fruit-compartment of the garden should be trained to a *single* stem, when they will make a low and not altogether unsymetrical tree; at any rate, a tree much more convenient than the quince *bush* which we usually find in our garden corners.

In addition to the varieties enumerated by Downing we were informed, we believe, by the Rev. Henry Little, Madison, Ia., a gentleman not a little curious and skilled in practical horticulture, that a quince was in the possession of the Shakers, Ohio, with a *sweet* instead of acid juice Who can give us exact information?—and what is more to the purpose, a tree, of this variety, if any such there really be?

Where the seed is to be planted, they should be *prepared;* they are covered with a thick mucilaginous matter which restrains their quick germination. Let them be put into water for twelve hours, and the water will become nearly as thick as paste. Pour it off and repeat the operation until they are nearly clean; mix them with sand and sow them immediately. A few trees, we presume, might be obtained here of the Portugal and of the Orange Quince.—*West. Far. and Gard.*

THE QUINCE.

Cydonia vulgaris, Dec.; *Rosaceæ*, of Botanists. *Coignassier*, of the French; *Quittenbaum*, German; *Kweepeer*, Dutch; *Cotogno*, Italian; and *Membrillo*, Spanish.

The Quince is a well-known, hardy, deciduous tree, of small size, crooked branches, and spreading, bushy head. It is indigenous to Germany and the south of Europe, and it appears first to have attracted notice in the city of *Cydon*, in crete or Candia — whence its botanical name, Cydonia. The fruit is of a fine golden yellow, and more nearly resembles that of the orange than any other. It was even more highly esteemed by the Greeks and Romans, for preserving, than by us. "Quinces," says Columella, "not only yield pleasure, but health."

The Quince seldom grows higher than fifteen feet, and is usually rather a shrub than a tree. Its large white and pale pink blossoms, which appear rather later than those of other fruit trees, are quite ornamental; and the tree, properly grown, is very ornamental when laden in October and November with its ripe golden fruit.

Uses.—The Quince is, in all its varieties, unfit for eating raw. It is, however, much esteemed when cooked. For preserving, it is everywhere valued, and an excellent marmalade is also made from it. Stewed, it is very frequently used, to communicate additional flavor and piquancy to apple tarts, pies, or other pastry. In England, wine is frequently made from the fruit, by adding sugar and water, as in other fruit wines; and it is a popular notion there, that it has a most beneficial effect upon *asthmatic* patients. Dried quinces are excellent.

In this country, large plantations are sometimes made of the Quince; and as it is, in good soil, a plentiful bearer, it is considered one of the most valuable market fruits. The Apple quince is the most productive and saleable; but as the Pear quince ripens, and can be sent to market much later, it frequently is the most profitable.

Propagation.—The Quince is easily propagated from seed, layers, or cuttings. From seeds the quince is somewhat liable to vary in its seedlings, sometimes proving the apple-shaped and sometimes the pear-shaped variety. Cuttings, planted in a shaded situation, early in the spring, root very easily, and this is perhaps the simplest and best way of continuing a good variety. The better sorts are also frequently budded on common seedling quince stocks, or on the common thorn.

Quince *stocks* are extensively used in engrafting or budding the Pear, when it is wished to render that tree *dwarf* in its habit.

Soil and Culture. — The quince grows naturally in rather moist soil, by the side of rivulets and streams of water. Hence it is a common idea that it should always be planted in some damp neglected part of the garden, where it usually receives little care, and the fruit is often knotty and inferior.

This practice is a very erroneous one. No tree is more benefitted by manuring than the quince. In a rich, mellow, deep soil, even if quite dry, it grows with thrice its usual vigor, and bears abundant crops of large and fair fruit. It should, therefore, be planted in deep and good soil, kept in constant cultivation, and it should have a top dressing of manure, every season, when fair and abundant crops are desired. As to pruning, or other care, it requires very little indeed—an occasional thinning out of crowding or decayed branches, being quite sufficient. Thinning the fruit, when there is an overcrop, improves the size of the remainder. Ten feet a part is a suitable distance at which to plant this tree.

The quince, like the apple, is occasionally subject to the attacks of the borer, and a few other insects, which a little care will prevent or destroy. For their habits we refer the reader to the apple.

Varieties. — Several varieties of the common quince are enumerated in many catalogues, but there are in reality only three distinct forms of this fruit worth enumerating, viz:

1. Apple-shaped Quince. Thomp.

Orange Quince,
Cydonia v. Maliformis, *Hort. Brit.*
Coignassier Maliforme, *of the French.*

This is the most popular variety in this country. It bears large roundish fruit, shaped much like the apple, which stews quite tender, and is of very excellent flavor. It also bears most abundant crops. Leaves oval.

There are several inferior varieties of the apple quince. The true one bears fruit of the size of the largest apple, fair and smooth, and a fine golden color.

2. Pear-shaped Quince. Thomp.

Oblong Quince.
Coignassier pyriforme, *of the French.*
Cydonier sub. v. pyriform, *Hort. Brit.*

The pear-shaped quince is dryer and of firmer texture than the foregoing. It is rather tough when stewed or cooked, the flesh is less lively in color, and it is therefore much less esteemed than the apple-shaped variety. The fruit is of medium size, oblong, tapering to the stalk, and shaped much like a pear. The skin is yellow. The leaves are oblong-ovate. It ripens about a fortnight later, and may be preserved in a raw state considerably longer.

3. Portugal Quince. Thomp.

Cydonia Lusitanica. *Hort. Brit.*
Coignassier de Portugal, of the French.

The Portugal Quince is rather superior to all others in quality, as it is less harsh, stews much better, and is altogether of milder flavor, though not fit for eating raw. For marmalade and baking it is much esteemed, as its flesh turns a fine purple or deep crimson when cooked.

The leaf of the Portugal Quince is larger and broader than that of the common quince, and the growth of the tree is stronger. It is therefore preferred by many gardeners for stocks on which to work the pear.

The fruit is of the largest size, oblong. The skin is in color not so deep an orange as that of the other sorts.

The Portugal Quince is unfortunately a shy bearer, which is the reason why it has never been so generally cultivated as the Apple Quince.

Ornamental Varieties. — There are two or three ornamental varieties of the quince, which are natives of China and Japan, and are now among the most common and attractive of our garden shrubs. They are the following:—

4. Japan Quince.

Cydonia Japonica. *Dec.*
Pyrus Japonica. *Thunburg.*

The Japan Quince is a low thorny shrub, with small dark green leaves. It is the most brilliant object in the shrubbery, during the month of April, the branches being clothed with numerous clusters of blossoms, shaped like those of the quince, but rather larger, and of the brightest scarlet. The fruit which occasionally succeeds these flowers, is dark green, very hard, and having a peculiar and not unpleasant smell. It is entirely useless.

The White, or Blush Japan Quince (*C. jap. fl. albo*), resembles the foregoing, except that the flowers are white and pale pink, resembling those of the common apple tree.

5. Chinese Quince.
Cydonia Sinensis. *Dec.*

We have had this pretty shrub in our garden for several years, where it flowers abundantly, but has, as yet, produced no fruit. The leaves are oval, somewhat like those of the common quince, but with a shining surface. The flowers are rosy red, rather small, with a delicate violet odor, and have a very pretty effect in the month of May, though much less showy than those of the Japan Quince. The fruit is described as large, egg-shaped, with a green skin and a hard dry flesh, not of any value for eating. The leaves assume a beautiful shade of red in autumn.

[*From the Boston Herald and Journal.*]

THE WONDERFUL VERMONT BOY.

Mr. Editor,—Being a few days in the vicinity of Royalton, Vt., on business connected with my Bible agency, I was induced by the reports I had often seen in the public prints of a remarkable boy of that town, to pay him a visit. The name of this precocious youth is Truman Henry Safford, Jr. At the age of twenty months he learned his letters. Before three years old he would reckon time upon a clock almost intuitively. He also learned to enumerate according to the Roman method from Webster's spelling book. He commenced going to school when three years old, but this he did not like. His mode of study was perfectly unique. He did not pursue the common

circuitous route to the results of study. Since then he has been a very little and now goes none at all. Probably no college in the United States could instruct him much, if any. When he first began to go to school, his teachers could not comprehend his ways, nor instruct his infant mind. Every branch of study he could master alone, with rapidity and ease. He commenced Adam's New Arithmetic on Tuesday morning, and finished it completely on Friday night! And when he finishes a book it is done perfectly. He would not fully set down his sums, but cover his slate with a shower of figures and at once bring out the answer. The teacher would look on in astonishment, unable to keep up with him or to comprehend his operations, carried on in his mind with the rapidity of lightning and then dashed on to the slate, no matter which end first. His thirst for all kinds of knowledge is very great. The whole circle of the sciences is as familiar to him as a household word. His father obtained for him Gregory's Dictionary of the Arts and Sciences, in three large volumes. This work, you know, is a vast encyclopedia of knowledge, treating briefly upon all branches of human knowledge. This was just the work he wanted; for an outline of anything is enough—he can make the rest. It was this book that first gave him a taste for the higher mathematics. Here he found the definition of a logarithm, and from this alone went on and made almost an entire table of them before ever seeing one. One day he went to his father and told him he wanted to calculate eclipses and make an almanac! He said he wanted some books and instruments. His father tried to put him off; but the boy followed him into the fields and whithersoever he went, begging for books and instruments with a most affecting importunity. Finally, his father promised to accompany him to Dartmouth College, and obtain for him if possible what he wanted. At this the boy was quite overjoyed; so much so that when they hove in sight of the college, he cried out in raptures, "O ,there is the college! there are the books! there are the instruments!" But they did not find all they wanted. At Norwich, however, they made up their complement. On coming home, the boy took Gummere's Astronomy, opened it *in the middle!* rolling it to and fro and dashing through its dry and tedious formulas, *went out at both ends!* By the way, this is his usual mode of study. He does not begin any book at the beginning, but always in the middle and then goes with a rush both ways. I asked if, when he opened Gummere's Astronomy in the middle he could comprehend those complicated formulas which depended on previous demonstrations. He replied, he could generally, but sometimes he "looked back a little." On arriving home he projected several eclipses, and also calculated them through all their tedious operations by figures. This, as all mathematicians know, involves a knowledge of the labarynths of mathematics, and also of formulas and processes most complicated and difficult. He has recently made an almanac for A. D. 1846. Two editions—the first of seven thousand copies and the second of seventeen thousand—have already been published and nearly all sold. In the almanac are the calculations of two eclipses of the sun, wrought out wholly by its infant author, besides other valuable tables; especially one showing the amount of duties on wool, under all the tariffs since the formation of the government up to the act of 1842. This table the boy calculated alone. And that he calculated without aid the two eclipses of the sun is attested by the published certificates of judges, lawyers, doctors, and clergymen.

Not satisfied with the old circuitous process of demonstration, and impatient of delay, young Safford is constantly evolving new rules for abridging his work. He has found a new rule by which to calculate eclipses, hitherto unknown, so far as I know, to any mathematician. He told me it would shorten the work nearly one third. When finding this rule, for two or three days, he seemed to be in a sort of trance. One morning very early he came rushing down stairs; not stopping to dress himself, poured on to his slate a stream of figures, and soon cried out in the wildness of his joy, "O, father, I have got it! I have got it! it comes! it comes!" I questioned him respecting the rule. He commenced the explanation. His eyes rolled spasmodically in their sockets, and he explained his work with readiness. To hear him talk so rapidly, and yet so technically exact, and so far above the comprehension of all, save the most profound mathematician, put to flight all my doubts, and filled me with utter astonishment. He said he did not know as his new rule would work in all cases, but as yet it had. He also remarked that the nearer noon the eclipse came on, the easier it was to apply his rule. But young Safford's strength does not lie wholly in the mathematics. He has a sort of mental absorption. His infant mind drinks in knowledge as a sponge does water. Chemistry, botany, philosophy, geography, and history are his sport. It does not make much difference what question you ask him, he answers very readily. I spoke to him of some of the recent discoveries in chemistry. He understood them. I spoke to him of the solidification of carbonic acid gas by Professor Johnston, of the Wesleyan University. He said he understood it. Here his eyes flashed fire and he began to explain the process.

When only four years old, he would surround himself upon the floor with Morse's, Woodbridge's, Olney's, Smith's, and Malte Brun's Geographies tracing them through and comparing them, noting all their points of difference. His memory, too, is very strong. He has pored over Gregory's Dictionary of the Arts and Sciences so much that I seriously doubt whether there can be a question asked him, drawn from either of those immense volumes that he will not answer instantly.

I saw the volumes and also noticed he had left his marks on almost every page. I asked to see his mathematical works. He sprung into his study and produced me Greenleaf's Arithmetic, Perkins' Algebra, Playfair's Euclid, Pike's Arithmetic, Davies' Algebra, Hutton's Mathematics, Flint's Surveying, the Cambridge Mathematics, Gummere's Astronomy, and several Nautical Almanacs. I asked him if he had mastered them all. He replied that he had. And an examination of him for the space of three hours convinced me he had; and not only so, but that he had far outstripped them. His knowledge is not intuitive. He is a *pure and profound reasoner*. In this he excels all other geniuses of whom I ever read. He cannot only reckon figures in his mind with the rapidity of lightning, but he reasons, compares, reflects and

wades at pleasure through all the most abstruse sciences and comprehends and reduces to his own clear and brief rules the highest mathematical knowledge. His mind is constantly active. No recreation or amusement can avail for any length of time to divert him from mental effort.

Being accompanied by Rev. C. N. Smith, of Randolph, Vt., who was acquainted with Mr. and Mrs. Safford, I had free access to the boy, and ample opportunity for a long and thorough examination. I went firmly expecting to be able to confound him, as I previously prepared myself with various problems for his solution. I did not suppose it possible for a boy of ten years only to be able to play, as with a top, with all the higher branches of mathematics. But in this I was disappointed. Here follow some of the questions I put to him and his answers. I said, Can you tell me how many seconds old I was last March, the 12th day, when I was 27 years old? He replied instantly, "85,255,200." Then said I, The hour and the minute hands of a clock are exactly together at 12 o'clock: when are they next together? Said he, as quick as thought, 1h. 5 5-11m." And here I will remark, that I had only to read the sum to him *once*. He did not care to see it, but only to hear it announced once, no matter how long. Let this fact be remembered in connection with some of the long and blind sums I shall hereafter name, and see if it does not show his amazing power of perception and comprehension. Also he would perform the sums mentally, and also on a slate working by the briefest and strictest rules, and hurrying on to the answer with a rapidity outstripping all capacity to keep up with him. The next sum I gave him was this: a man and his wife usually drank out a cask of beer in 12 days; but when the man was from home, it lasted the woman 30 days: how many days would the man alone be drinking it? He whirled about, rolled up his eyes, and replied at once, "20 days." Then said I, What are the values of x in the equation $a^2+b^2-2bx+x^2=m^2x^2$? He sprung to his slate, and dashed on a few figures and replied in about a minute, $x=\frac{n}{n^2-m^2}\left(bn+\sqrt{a^2m^2+b^2m^2-a^2n^2}\right)$. He also gave me the negatitive value of x.

Then said I, What number is that which being divided by the product of its digits, the quotient is 3; and if 18 be added the digits will be inverted? He flew out of his chair, whirled round and said in about a minute, "24." Then said I, Two persons, A and B departed from different places at the same time, and travelled towards each other. On meeting it appeared that A had travelled 18 miles more than B; and that A could have gone B's journey in 15¾ days, but B would have been 28 days in performing A's journey. How far did each travel? He flew round the room, round the chairs, writhing his little body as if in agony, and in about a minute sprung up to me and said, "A travelled 72 miles and B 54 miles didn't—they? Yes." Then said I, What two numbers are those whose sum, multiplied by the greater is equal to 77; and whose difference, multiplied by the less, is equal to 12? He again shot out of his chair like an arrow, flew about the room his eyes rolling wildly in their sockets, and in about a minute said, "4 and 7." Well, said I, The sum of two numbers is 8, and the sum of their cubes 153. What are the numbers? Said he instantly, "3 and 5." Now in regard to these sums, they are the hardest in Davies' Algebra. I have had classes of one hundred scholars who have not been able to perform several of them But young Safford, at one reading, comprehended them at a flash, and returned, almost instantly, correct answers. He also gave me correct Algebraic formulas for doing them. Then I took him into Plane Trigonometry. Said I, in order to find the distance between two trees, A and B, which could not be directly measured, because of a pool which occupied the intermediate space, the distance of a third point, C, from each was measured, viz: C A—588 feet and C B—672 feet, and also the contained angle A C B—55° 40′ required the distance A B? He seized his slate, covered it with a group of figures, performed some of it mentally, and brought out the answer in about two minutes, saying, "592·967 feet." I then gave him this in the mensuration of surfaces: What is the area of a trepazoid whose parallel sides are 750 and 1221 and the altitude 1540? He walked rapidly across the floor, and whirled about to and fro, and replied, "152,075." Then said I, if the diameter of the earth be 7921, what is the circumference? He said instantly, "24,884·6136." To do this he multiplied 7921 by 3·1446. This he did mentally quicker than I could write the answer. Then I gave him this: How many acres in a circular piece of ground whose circumference is 31,416 miles? He sprung on to his feet, flew round the room, and in a minute said "50,265·6." Then said I, required the number of acres of blue sky in an ellipse whose semi-axes are 35 and 25 miles? He began to walk the floor again, twisting his little body, and whirling his eyes spasmodically, and in about a minute said, "1,759,296 acres." How did you do it? said I. Said he, "Multiply the semi-axes together, and that product by 3·1416 and that product by 640." And did you perform the entire operation in your mind so soon? "Yes sir." Then I took him into the mensuration of solids. Said I, What is the entire surface of a regular pyramid whose slant height is 17 feet, and the base a pentagon, of which each side is 33·5 feet? In about two minutes, after amplifying round the room, as is his custom, he replied, "3354·5558." How did you do it? said I. He answered, "Multiply 33·5 by 5, and that product by 8·5, and add this product to the product obtained by squaring 33·5, and multiplying the square by the tabular area taken from the table corresponding to a pentagon,"

Now let it be remembered that this boy is only *ten years old*—that he did this sum for the first time in about *two minutes*, almost wholly in his head—and who can account for it? Then I asked him about his rule respecting the intersection of circles and the cutting away of the area, as reported by Prof. Dennison. He said it was wrong and explained to me satisfactorily how it occurred. The fact is, the boy is sometimes apparently lost in thought, or absent minded, and unless he is often told to keep his mind on his work, he may, the first you know, be reading or studying out something that seems suddenly to come into his mind. It is possible that this had something to do

with the error alluded to. This mistake has been fully explained by his father in the New York Observer. To test him on this point I inquired, Suppose two equal circles cut each other 6-12 of their diameter, how much of the area will be cut away? said he, *instantly*, "391 one thousandth." How do you know? said I. He seized his pencil and slate, drew a diagram, and demonstrated this property: "that the area intercepted between the circles is equal to twice the area of a segment of a circle, the area of which circle is equal to one; and the height of the segment is equal to the diameter of the circle multiplied by the number of digits intercepted between the circumference of the two circles, and divided by 24, or 2×12." I then asked him to give me the cube root of 3,723,875. He replied quicker than I could write it, and that mentally, "155, is it not?" "Yes." Then said I, What is the cube root of 5, 177, 717? Said he "173." Of 7,880,599? He instantly raid "199."

These roots he gave, calculated wholly in his mind as quick as you could count one. I then asked his parents if I might give him a hard sum to perform mentally. They said they did not wish to tax his mind too much nor often to its full capacity, but were quite willing to let me try him once. Then said I, Multiply, *in your head*, 365,-365,365,365,365,365 by 365,365,365,365,365,365!! He flew round the room like a top, pulled his pantaloons over the top of his boots, bit his hand, rolled his eyes in their sockets, sometimes smiling and talking, and then seeming to be in agony, until in not more than minute, he said, "133,491,850, 208,596,925,016,658,299,941,583,225!" The boy's father, Rev. C. N. Smith, and myself had each a pencil and slate to take down the answer, and he gave it to us in periods of three figures each, as fast as it was possible for us to write them. And what was still more wonderful, he began to multiply at the left hand, and to bring out the answer from left to right, giving first, "133,491," &c. Here, confounded above measure, I gave up the examination. The boy looked pale and said he was tired. He said it was the largest sum he ever did. In conclusion, I am aware that this narrative is almost incredible. But let it be remembered that I went a skeptic, took a good witness with me, examined the boy carefully, and here pledge my sacred honor that all I have here stated is true. Rev. Mr. Smith, of Randolph, Vt., is a witness to the correctness of this report. Further if any are disposed to disbelieve my statement, I beg them to make a tour to Royalton, Vt., where they will find the boy and have an opportunity to examine him for themselves. I was informed that he had been offered $1000 a year to cast interest for a bank not far from his father's. Mr. Safford has received many urgent proposals to permit his wonderful son to be carried round the world for exhibition, but he will not consent. Gentlemen of wealth have offered pecuniary aid to furnish the boy with books, &c.; especially one of Cincinnati —the patron of the distinguished Powers.

HENRY W. ADAMS,* Ag't. Am. B. S.
Concord, N. H., Jan. 1846.

To this we add another account, from F. Richardson, of Charlestown, Mass.

His head is of a large size for one of his age; he has a very superior development of the intellectual organs, especially those of the upper part of the forehead, in the region of causalty and comparison; the anterior and upper part of the head greatly predominate over the posterior and lower part, giving the greater portion of the brain in front of the ears, which gives great mental power. Such an organization of brain which is combined with a predominating nervous temperament, is favorable for the highest degree of mental activity, acute susceptibility, and clearness of perception* —hence, we can account for his intuitive power and great activity of mind.

He has great physical activity, is somewhat restless and uneasy, mild and amiable in his disposition, seems to be indifferent as to what is said in his praise, and appears to be constantly studying into objects around him. His frame is slender and is about the usual height of lads of his age; his face is rather long, high forehead and quick flashing eye.

Much anxiety is felt by his friends with regard to his health; but knowing his father, T. H. Safford, Esq., to be a gentleman of studious character and high intellectual attainments, we feel confident that he will watch over him with that paternal care he so much needs, direct his mind, and attend *well* to his physical education.

* *Graduate of Middletown, Conn.*

* *Circumference of the head, 22 inches; from the opening of the ear around the head below the occipital spine, 7¾; do. over firmness, 14 inches; do. over benevolence, 13½ inches; do. round individuality, 11 inches. Calculation is large: his causalty, comparison, ideality, imitation, and constructiveness are very large. As I must be brief, it is hoped that the friends of phrenology will excuse me for not giving further details of his phrenological developments.*

THE WAY TO ANALYZE SOILS.

When John Practice had brought the labors of another day to a close, and the shadows of the quiet evening were again thickening round Practiceville, Science resumed his series of instructions.

I told you, said he, in my last lesson, that the analysis of soils was of the utmost importance to the farmer, and by no means an impossible thing for him to acquire. Its acquisition will amply repay the trouble it may occasion, and its value will be apparent at every turn of his business career.

For instance, I say emphatically that no man can be an *efficient judge of lands without he can analyze soils*. I am aware many people, by long experience have gained a certain knowledge of land, by which from superficial inspection, they can, in some measure, judge of its productiveness generally, and its particular adaptation to the growth of certain crops. But such judges are exceedingly liable to be deceived; in fact, no certain confidence can be placed in their opinion. They don't know the constituents of the soil—they never trouble themselves about the subsoil; its capacity for retaining moisture in dry weather; its organic and saline particles; its lime, magnesia, or iron—all these things which bear a most intimate relation to the fertiltty of the soil they never inquire into. The consequence is, that they do not know how that land will act in very dry or very wet weather—they do not know whether it will grow wheat, tobacco, or turnips—what manure it will require and whether it does, vegetably or geo-

logically contain the means for producing that manure—in fact their judgment is little better than mere shrewd guessing; it may possibly be right, but there is no demonstration or proof accompanying their opinion; the why and the wherefore, the reason and the foundation of their opinions are wanting, neither can they supply them.

The man who understands the analysis of soils knows all they do in a more perfect manner, and he knows more. He can inform you what the soil is composed of, and how its composition will act under certain states of weather; how in dry weather; how in rainy—he will inform you what crops that compositionn will best grow, and what manure to supply to it to make up any deficiency. Hence this knowledge becomes of immense value.

See a farmer or emigrant setting out westward into unsettled regions, in search of a piece of land. Suppose him to be able to analyze the soil. When he reaches a favorable piece of ground, be commences an examination of its qualities. Boring into the earth he endeavors to ascertain the depth of the subsoil. With his humble apparatus he enamines the nature of the soil. He will soon know its fertility and what it will grow. In an hour he will know the *humus* or organic matter, the lime, the clay and the sand it contains. He will have ascertained its power of retaining moisture; and will judge at once with an accuracy nearly approaching certainty of the qualities and capabilities of a piece of land he never saw before, and from which the hand of labor and art has never yet extracted support and wealth.

See such a man on a farm which he has visited with a view of purchasing it, if suitable. It may be a farm exhausted by repeated croppings until its soluble salts and humus are taken out of the soil. In damp weather and certain seasons such a farm would be possibly arrayed in a verdure of deceptive vegetation; but in its crops would be considerably deficient.

The analyzer of soils knows this; a skin-deep survey will by no means satisfy him. He must literally look into the matter. He tests the soil; he finds its soluble extracts, its nourishments, its feeding principles gone—nothing remaining but a skeleton soil—a beggarly account of sand and clay not worth the labour of recovering to a state of fertility.

Mode of taking samples of soil to analyze.—In analyzing a soil, the first matter requiring attention is taking the samples to be tested. Soils frequently very materially vary in the same field. You will often notice at one part of the field a rank and luxuriant vegetation waving its dark green verdure in the sun, and in another part a thin seedy vegetation, intermixed with broom, heather, or rushes, will denote a patch of poor land. On river banks and upon the site of old forests are accumulations of alluvial deposits, or decayed vegetable matter giving an extreme fertility to particular portions , which cannot be said actually to belong to the soil, though, of course, if these are extensive they become a marked item in the value of a farm.

My own mode is to take an iron tube something like a round cheese-borer, and about as long as a common walking stick, with this I set out, and at various places I twist this borer into the soil about a couple of feet down, or deeper in those places in which I wish either to see of what the subsoil is composed, or test the deepness of the surface soil.

After pulling out the borer, I thrust out the earth with a stick upon a table or board; it comes out retaining its shape which I am careful not to break until I have examined it. It is a round roll of earth, about two or three feet long, and about as thick as a mould candle.

As lays before me, I can examine each layer of soil through which the borer has passed. A bore in your wheatfield "Tull," for instance, is before us. About a foot below the surface, you perceive the earth is dark friable loam; It crumbles freely when you touch it, and yet if you squeeze it between your finger and thumb it feels fatty and sticks together. It has a smell of rotting bark or mouldering damp wood. Without any analysis you would pronounce that to be a fine soil. About fourteen inches from the top the color of the soil becomes much lighter; it has less humus or decayed vegetable matter, it is, however, soft, and yet not stiff and clammy like clay. It is evidently a calcareous soil: it must coutain a considerable quantity of lime along with its sand and clay.

It is important that we should be sure about its containing lime, and know certainly whether it is a calcareous soil or not. We can test it. That is, we can subject it to a process which, with lime produces certain results, and if on applying the tests those results follow in this soil, it is proof that it contains lime.

To ascertain this I will take a pinch of this soil, and pour a few drops of *muriatic acid** (or spirits of salt) upon it; if it effervesces, it is proof of lime being present; if it does not bubble up, like soda water, there is no lime. Well there it is—you see it smokes and bubbles up in some degree. There is lime there, it is a calcareous soil; the quantity of lime we shall see by analysis by and by.

Farther down in the tube the soil becomes lighter and dryer—there is more sand in it as we get lower down, and at three feet we seem to have touched a rock or else a large stone, which arrested our progress.

On the knoll behind the farm house, we took this other bore, which you perceive shows very marked traces of its formation. Within a foot of the surface there is a light, free, black mould, interspersed with a considerable quantity of vegetable fibre, not decomposed; at fourteen inches down we run at once into a gray soil, full of glittering particles, which continues as deep as we could get. This is decomposed or crumbled granite, the sand, clay, potash, and small quantities of lime and iron are decomposed, but the *mica schist* has not quite decomposed—it exists there in small shiny scales, something like fish scales. It is almost insoluble but in time it will disappear.

Upon this decomposed granite soil a forest has grown, and for ages shed its leaves, which have decomposed and formed a soil containing largely of vegetable humus, amongst which are still the unrotted fibres and roots of trees and plants. This will make a fine soil.

* *Sulphuric acid, (oil of vitriol) or strong vinegar, will produce somewhat similar results, but not so certainly. Anything that will unite with the base of lime and liberate the carbonic acid gas, will produce this effervescence, which merely arises from the escape of the gas. If no effervescence occurs, it is a sure proof that there is no lime in the soil.*

This soil is not calcareous. You may see that at a glance; if there had been lime present, it would have decomposed those fibres long ago; wherever there is undecomposed vegetable matter, it is a proof of absence of lime. You see by this, that your knoll wants liming simply to decompose those fibres and make manure of them.

When you wish to analyze, get a good many of these samples collected, note down, as you thrust them out of the borer, the depth and appearance of the bore; and then take about a half a pound of the earth about three inches below the surface, put it in a bottle and cork it up; paste a piece of paper on the bottle outside, saying where you took it from, and the depth of the soil, its appearance and the nature of the subsoil.

You have, I will suppose, got your samples carefully collected, you must now endeavor—

To classify them into their kinds of soil, which is done more for convenience sake than anything else. The eye, the touch, and the smell will guide you in this matter.

A clayey soil is well known by its stiff, adhesive nature; when the entire soil only contains 25 parts in 100 of pure clay it will have a strongly adhesive property; 50 parts in 100 is a strong clay land.

A silicious soil (*i. e.* sandy) has the appearance of sand—the round gritty touch of sand; and will scratch glass. About 80 parts in 100 of sand will constitute a free dry soil, which may be considered sandy soil; though really sandy soils have sometimes from 85 to 95 per cent. of silicous particles.

A calcareous soil we have described above. A soil may be called calcareous when it contains 20 parts of carbonate of lime in 100 parts.

A loam is a mixture of sand, clay and lime, frequently in equable proportions; 75 parts of sand, 20 of clay, and 5 of lime (with vegetable matter), make a free working loam, and may be known by its friable touch when crumbled, and its adhesiveness when pressed. Sometimes it is red or yellow, caused by iron in the form of an oxide, and is then styled "ferruginous," or partaking of the nature of iron.

A slaty soil is known by its abundance of vegetable fibre and its comparative sponginess. If a red coloured liquor is squeezed out, it is an undecomposed peat, and requires either lime or burning to dissolve its fibrous matter.

A black organic soil we have described above; it is known by its color, its smell of mouldy or damp rotting wood, and its comparatively light weight, or less specific gravity.

Having classified the soils you wish to examine, you write down your opinion of them, judging from their appearance, touch, and smell. It is surprising what great correctness in judgment of soils will be gained at this stage after a few experiments.

The things necessary to analyse soils, in the way of aparatus, are few and simple; any druggist keeps them, or can procure them at about the following prices:

A pair of scales, to weigh a quarter of a pound, which will turn with a grain—a set of small weights, from ¼ to 1 grain Troy, with about 100 grains of additional weights, in 20, 10, and 1 grains—cost - - - - - - - - 75c. to $1

Two small wire seives, or bits of wire cloth, bent like a saucer, the one large in the mesh as a pea, the other small as a mustard grain - - - - 5c. to 25c.

Three or four small vial bottles, holding each 5 ounces of water, (empty) 12c.

A set of Hessian crucibles, say from 2 to 4 ounces - - - - - - - - - 20c.

A wedgewood or glass pestle and mortar 20c.

Six cents-worth of filter paper, folded so as to hold half a pint of liquid, and greased at the edges.

A glass funnel, (and if convenient to procure, about 2½ feet of half-inch glass tubing, worth about 25c., is useful.)

Twelve cents-worth of muriatic acid, in a bottle with a glass stopper.

Six cents-worth of prussiate of potassa, in a common vial.

The above, which can all be had for about two dollars, or less, will be sufficient, with the use of such things as a farmer has always in his house, to conduct an analysis sufficiently correct for all practical purposes. Besides, most of the above things are extremely useful to farmers for many purposes besides the one here pointed out.

INSECT IN THE CORN.

Our readers will recollect a reference in the last number of the Cabinet, page 101, to a worm or moth, found in the grains of corn, by C. W. Haywood, of Germantown. The presence of this insect, as indicated in the ear left at the office, was viewed by the editor with considerable alarm. On the 14th ult. he addressed a letter to Dr. Harris, so well known for his researches in natural history. The importance of the matter to which it refers, will excuse the publication of the following extracts from it, in connection with the reply so kindly and so promptly returned. The letter refers to the "fly weevil, that destroys wheat in Virginia and some of the Southern and Western States." Is this weevil confined to Southern parts of our Union, or is it identical with that which is but too commonly found in this vicinity? We have frequently known granaries of rye very much injured by a weevil in New Jersey. It was our practice, when its appearance was feared, to sprinkle a little very finely powdered air-slacked lime through the bin, among the grain. We have also heard it said, that the presence of sheep in a barn where grain is kept, is particularly offensive to the grain weevil.

The appeal made at the close of Dr. Harris' letter, will, we trust, be freely responded to. Great inconvenience results from the depredations of the worm in the locust tree. The value of this timber is perhaps not exceeded by that of any grown among us, yet it seems hardly worth while to attempt to cultivate the tree, as it is so soon, and so certainly, and so seriously injured by the worm. A remedy would be of great general benefit.

Ed. Far. Cab.

The following is an extract from the editor's letter to Dr Harris: "I received a day or two ago, from a friend at Germantown, in this vicinity, an ear of corn of last year's growth, most of the grains of which were perforated in a very singular manner, by an insect which has drawn its nourishment

from the softer part, and of course, greatly diminished its value. C. W. Haywood, who gave it to me, stated that his attention was first directed to the matter some five or six weeks ago, by observing that his garret, where some five and twenty or thirty bushels of corn lay in the ear, was swarming with a dun-colored moth, which he soon ascertained had escaped from the grains. I enclose a few grains, from some of which I think it will be found the moth has not yet made his escape. Yesterday while holding a grain in my hand, one came leisurely out, and I put a pin through it, intending to forward it herewith, but this morning it is mouldered to pieces. It would be gratifying to me to receive any information relative to this insect. My friend said he had not learned that the corn of any of his neighbors had been similarly attacked.

"It is impossible to estimate the amount of injury that might be done to the great staple of our country by the depredations of this insect, should it widely extend through our corn-cribs."

CAMBRIDGE, MASS., Oct. 16, 1846.

Respected Friend,—Your letter of the 14th instant, reminds me of the pleasure that I took in reading those numbers of the Farmers' Cabinet which you had the kindness to send to me from the 15th of March, 1844, to the 15th of May, 1845, inclusive.

You have some reason to be alarmed at the appearance of the insects in the corn-crib of your friend Haywood. Should they prevail to any extent in our country, they would prove a terrible scourge; now more than ever, since the potato is likely to fail us entirely, and we have nothing to supply its place save corn. Bread is the staff of life: we must take care that it be not broken.

The little dun-colored moth which you saw come forth from a kernel of corn in your hand, is the fly-weevil, that destroys wheat in Virginia and some of the Southern and Western States. Shall I give it a more fearful name, by acknowledging that it is the *Angoumois moth*, the same insect that appeared in the provinces of *La Vendee* and *Angoumois*, in the west of France, more than a hundred years ago; that it continued to increase there for many years, till its ravages in 1760, attracted the attention of the Government, when it was found to swarm in all the wheat fields and granaries of these provinces; when by its ravages the people were not only deprived of their principal staple, wherewith they were wont to pay their annual rents, their taxes, and their tithes, but were threatened with starvation, from the want of good and wholesome bread. Let us hope to be saved from the lake calamity.

The great and good Linnæus, was filled with alarm on finding the pea-weevil in a parcel of peas received from America, fearing that he might be the means of introducing into his beloved Sweden so great an evil. How much more have we reason to dread the spreading of this *Angoumois moth* in our own country.

You will find some account of this moth in my Treatise on Insects Injurious to Vegetation, published in 1842. At that time the habits of the insect were not known to me from personal observation; all my attempts to obtain samples of infected grain containing living specimens, having been ineffectual, and my numerous letters and applications on the subject having remained unnoticed. Since then I have been more fortunate, and have had the insects in all their stages, living under my own eye. It does not seem to be generally known that this insect attacks maize, or corn, as we call it, as well as wheat. The fact was made known to me nearly two years ago. A friend in Worcester, Mass., told me that he found some corn that had been stored in his garret some time, contained insects in it; and he brought me two ears of this corn for examination. The corn, then appearing to be sound externally, was rolled up in several sheets of strong brown paper, and was tied securely and laid aside in a safe place. Some months afterwards, on opening the parcel, I found nearly a gill of dead moths in the paper, and three or four living ones. Every kernel appeared to have been perforated, and many had three or four holes in each of them. Some contained the insect in the worm state, and some had the crysalis fully formed within them. The two ears were then put into a wide-mouthed glass bottle, which was corked tight, so as to prevent the future escape of the moths that might be developed from the worms and chrysalids remaining in the kernels. The moths have continued to come forth, and, as they were prevented from escaping, they paired and laid their eggs upon the corn in the bottle. Two broods have been produced in a single year; the first brood coming out of the corn early in March, and the second in September and October. Probably the appearance of the first brood was accelerated by the insects being kept in a warm room during the winter.

Having made accurate drawings of the insects in their several states, and written a scientific description of them, I have been trying to collect the statistics relative to them, in those parts of the country where they have heretofore appeared, with the design of drawing up for publication a memoir on the history of this depredator. Communications on the subject, addressed to me, will be very acceptable.

The moths are easily killed by the fumes of burning sulphur, and of charcoal, by steam, and by moderate heat otherwise applied. From experiments made in France, it would seem that violent agitation of the grain, continued during several hours, will destroy the insects in all their stages. I have, however, much more confidence in the application of heat, by drying the damaged grain in an oven or a kiln, heated to 160 degrees of Fahrenheit, in which the grain should remain during twelve hours. This will effectually kill both the larvæ, or worms, and the eggs.

Proposals have been made to me to prepare another edition of my Treatise, with figures. I am therefore very desirous of obtaining the means for completing the history of two or three destructive insects noticed in the work. Permit me to ask your attention, and that of your correspondents, to the insect that bores in the pith of the locust tree, and causes the swellings of the young branches, described on page 295 of my Treatise; and also to the wheat catterpillar, of which a very imperfect account, extracted from various agricultural papers, is given on pages 445 to 457, of my work. My official duties in the University at Cambridge, have been such for some time past, as to deprive me of that leisure which the successful study of our destructive insects demands. I must therefore rely upon those of my agricultural and

scientific correspondents who are interested in such subjects, to furnish me with such specimens and facts as are necessary to make another edition of this book more complete and useful than the former one has been.

In the hope that this appeal and this communication will be favorably received,

I remain, very truly,
Your obliged friend,
THAD. WM. HARRIS.

POPULAR ERRORS.—*Shrinking and swelling of meat in the pot.*—When children, we used to be told that pork, beef, &c., killed in the *old* of the moon, would *shrink in the pot;* and if in the *new it would swell;* and a great many good, honest farmers, religiously observed her waxing and waning quarters for their periodical packing. That some meat shrinks, while other swells, is a fact too notorious for cavil; but that the moon is to be praised or blamed for this agency we most fully deny.—The true cause of these changes is to be found in the manner of feeding the animals before slaughtering. An animal that has been long and well fed, till the fat-cells have become fully charged with solid matter, will, on exposure to boiling water, absorb a portion of it, and consequently swell the dimensions of the flesh; while that which has been hastily or but partially fattened, will diminish in cooking from the abstraction of the juices which occupied the cavities or spaces between the lean fibres. This is the *whole secret* of the *shrinking* and *swelling* of meats. It will thus be perceived that one carcase of equal weight may differ materially in value from another of nearly the same apparent quality. This difference in value is equally manifest in the quality of fish and poultry. Eggs from well-fed hens are also much more rich and substantial than those which are produced by hens sparsely fed. The latter will invariably be found meagre and watery.—*Amer. Agriculturist.*

WALNUTS.—It has been ascertained that the shag-bark walnut may be successfully engrafted and that the engrafted trees are much the surest bearers. It is probable that the hickory or shag-bark, would do well engrafted on the pig-nut. If it should, the quantity raised might be greatly increased and the quality much improved. The Maderia nut, which is usually sold at the shops under the name of the English walnut, at twelve and a half to sixteen cents per pound, may be cultivated here without difficlty, and is very productive. In the vicinity of New York there is a tree which has produced, in a single year, as many as sold in the market for $200. We have no doubt that it might be engrafted on the butternut or the walnut with perfect success.

THE BLIGHT.—The blight has affected various other plants besides the potato in Europe. Among those that have suffered by its influence are the tomato, dahlia, lettuce, endive, spinach, hemp, onion, carrot, turnip, the vine, Windsor beans, and egg-plant. We consider this among the numerous evidences or circumstances, showing that the blight is caused by atmospheric influence.

In this country, since the potato-blight has prevailed, the carrot has blighted; and some varieties of apples have decayed prematurely, with an unusual blight. These cases are doubtless from the same cause.—*Boston Cultivator.*

ROYAL FLOUR AND ROYAL PRICE!—Last fall Mr. Henry Smith, an enterprizing miller of Le Roy, in this county, sent six barrels of the choicest superior Genesee flour, manufactured at his mill in Wheatland, Monroe county, to Queen Victoria, and for which, in due time, he received from her Majesty the comfortable little sum of *three thousand dollars!* The flour was put up in highly finished barrels, neatly varnished, enclosed in sacks, and forwarded direct to the Queen at London.

This fortunate experiment upon the appetite of Royalty seems to have suited her Majesty's palate so nicely that in addition to the ample remuneration for his first adventure, he has recently received an order direct from London, for *three thousand barrels* "of the same sort," which he has promptly forwarded.—*Batavia Times.*

BLOODY MILK.—Blood in milk arises from the rupture of blood vessels in the lacteal gland, where the milk is secreted from arterial blood. One has to rely mostly on nature to heal the bleeding vessels. Quack nostrums can do but little good at best, and may injure the general health of a valuable cow. Milk very gently three times a day, and wash the bag in a solution of a little salt. The object of frequent milking is to avoid the great distension of the vessels in the gland, and their liability to bleed; while the application of cold water will serve, like applying it to the forehead or back of the neck to check bleeding at the nose, to contract the open mouths of the capillaries which exude blood into the milk.—*Genesee Farmer.*

TO FARMERS.

THE undersigned offers for sale, at his farm two miles north of New Albany, a full blood Durham Bull; also, a few pair of Berkshires—full blooded. dec 1846 3t R. M. JONES.

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